DAEWOO

Service Manual

Window Type
Room Air Conditioner

Model: DWC-0520RLE
DWA-1220C
DWC-1220R
DWA-1220R

DAEWOO ELECTRONICS CORP.

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1.PRECAUTION

Please observe the following instructions.

1. Turn off unit.

Make sure the unit is OFF and the AC cord is unplugged before repairing or servicing.

2. In case of checking the circuit unavoidably while the unit is connected with power source, be careful not to connect with the part of electric charge.

You may cause electric shock.

3. Use of proper part if you need to replace the part, be sure to use genuine part of servicing model.

Do not repair or replace the electric contact part.

Consumer must not repair the unit, because it is dangerous.

4. Use of proper tool.

You must use the proper tool to repair the unit, and use the measuring appliance adjusted accurately.

5. Damage of electric wire and power cord when servicing.

Check electric wire and a surely replace a damage electric wire and a damage power cord.

6. Never use connecting the middle of wire, after cutting the middle of wire.

It may cause a fire and trouble.

7. Checking the insulation resistance.

After you complete the assembly of unit, surely check the insulation resistance.

Confirm that the insulation resistance of the power line and the ground terminal is over 30M by measuring insulation resistance.

8. Checking the ground.

After checking the ground, servicing it completely.

9. Checking the installation.

After checking the installation, servicing it completely.

10. Care children.

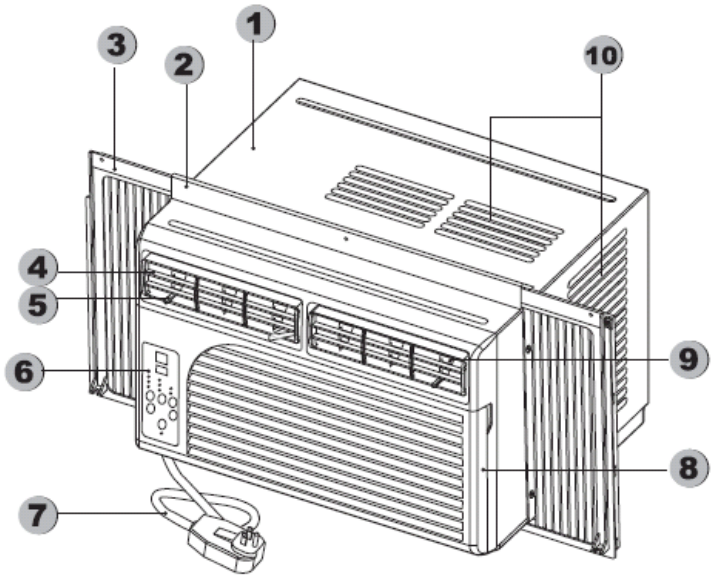
When servicing, do not make the children approach the air-conditioner.

2.GENERAL SPECIFICATION

ITEM \ MODEL		DWC-0520RLE	DWC-1220R	DWA-1220R	DWA-1220C
Function		Cooling Only			
Power source		AC 115V,60Hz	AC 115V,60Hz	AC 220V,60Hz	AC 220V,60Hz
Cooling Capacity	Btu/h	5118	11942	11942	11942
	Kcal/h	1290	3010	3010	3010
Energy Efficiency Ratio	Btu/Wh	10.8	9.48	9.48	9.48
	Kcal/Wh	2.7	2.4	2.4	2.4
Dehumidification	Pts/h	1.53	2.86	2.86	2.86
	g/h	700	1300	1300	1300
Electrical Data	Power Input(W)	490	1265	1266	1266
	Running Current(A)	4.6	11	5.9	5.9
Compressor	Type	Rotary			
	Model	QA075CDE	EH160X1C-1DZDU3	PH160X1C-3DZDU	PH160X1C-3DZDU
	Capacitor	35μF	45μF	35μF	35μF
Fan Motor	Model	YDK-25B-6D	YDK-90B-4D	YDK-90B-4C	YDK-90B-4C
	Capacitor	4μF	18μF	4μF	4μF
	Indoor-Fan	Blower Fan			
	Outdoor-Fan	Propeller Fan			
Refrigerant(R-22)	Contronl	Capillary			
	Charge Amount(g)	410g	690g	700g	700g
Dimensions	Unit(W*H*D)	473*322*395	484*366*546	484*366*546	484*366*546
	Packing(W*H*D)	585×460×380	582*430*625	582*430*625	582*430*625
Weight	Net Weight	23kg	36kg	36kg	36kg
	Gross Weight	27kg	38kg	38kg	38kg

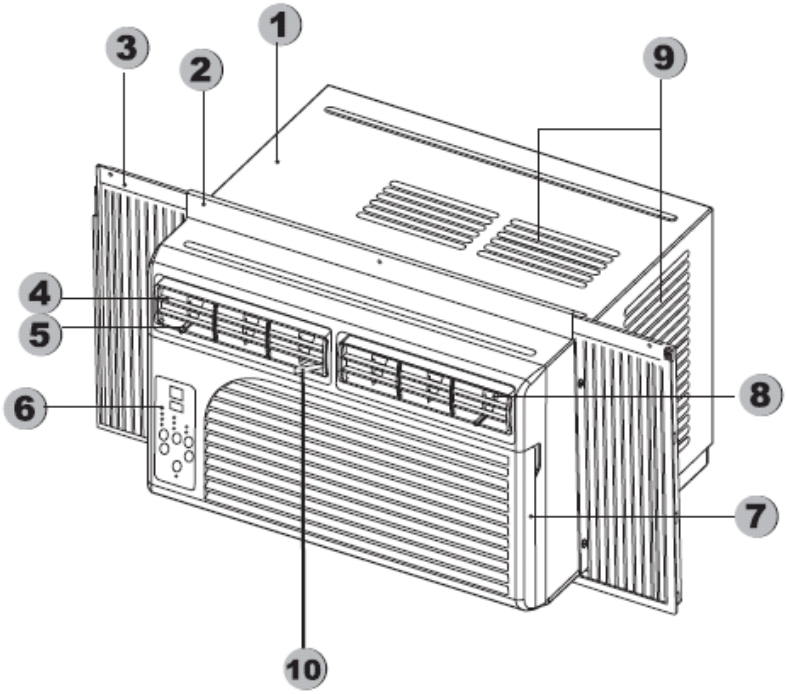
3.NAMES OF MAJOR COMPONENTS

DWC-0520RLE



1. **Cabninet**
2. **Upper guide**
3. **Curtain(window filler)**
4. **Up/down air direction flap**
5. **Left/right air direction control tab**
6. **Operation panel**
7. **Power cord**
8. **Front grille**
9. **Left/right air directiion fin**
10. **Air inlet**

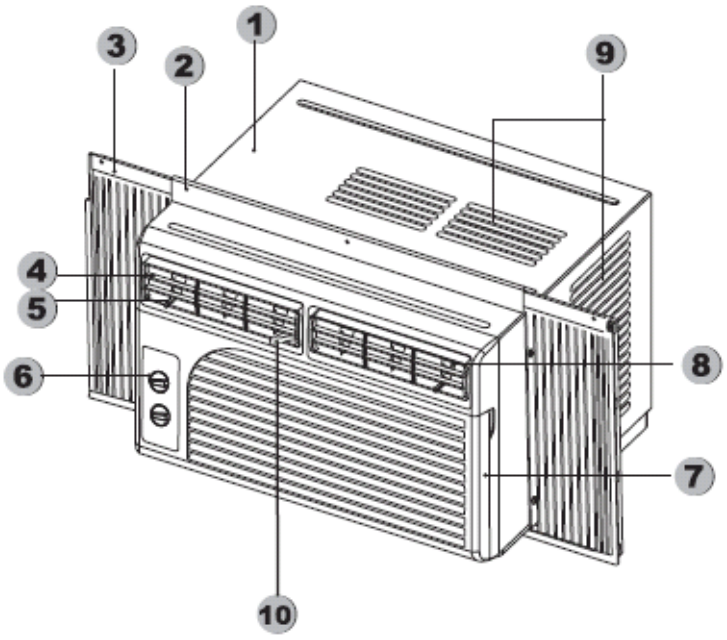
DWC-1220R , DWA-1220R



1. **Cabninet**
2. **Upper guide**
3. **Curtain(window filler)**
4. **Up/down air direction flap**
5. **Left/right air direction control tab**
6. **Operation panel**
7. **Front grille**
8. **Left/right air directiion fin**
9. **Air inlet**
10. **Fresh air switch**(optional,some models are not supplied with this)

3.NAMES OF MAJOR COMPONENTS

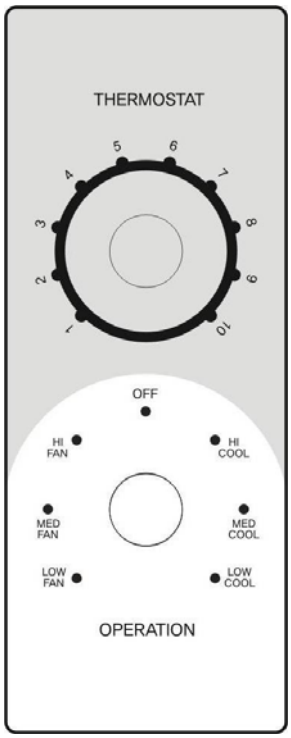
DWA-1220C



1. **Cabninet**
2. **Upper guide**
3. **Curtain(window filler)**
4. **Up/down air direction flap**
5. **Left/right air direction control tab**
6. **Operation panel**
7. **Front grille**
8. **Left/right air directiion fin**
9. **Air inlet**
10. **Fresh air switch**(optional,some models are not supplied with this)

4. FUNCTION OF MAIN COMPONENTS

1. ROTARY SWITCH (SELECTOR) (FOR DWA-1220C)



These knobs are used to control the rotating speed of the fan motor or the operation mode of the air conditioner.

● When the knob is turned to "**Low Fan**", the air conditioner will enter the ventilation mode of operation with weak airflow delivery,but the compressor is not activated.

● When the knob is turned to "**Med Fan**", the air conditioner will enter the ventilation mode of operation with strong airflow delivery,but the compressor is not activated.

● When the knob is turned to "**Hi Fan**", the air conditioner will enter the ventilation mode of operation with stronger airflow delivery,but the compressor is not activated.

● When the knob is turned to "**Low Cool**", the air conditioner will be in low cooling operation mode to delivery weak airflow.

● When the knob is turned to "**Med Cool**", the air conditioner will be in medium cooling operation mode to delivery strong airflow.

● When the knob is turned to "**Hi Cool**", the air conditioner will be in high cooling operation mode to delivery stronger airflow.

● When the knob is turned to "**OFF**", the air conditioner will stop operation.

Note: When the knob is to be turned, try to turn it as slowly as possible and not to turn it frequently. The time interval for re-activation must be no less than 3 minutes so as to avoid overload to the unit, which might cause fuse blown.

2.THERMOSTAT (TEMPERATURE CONTROL) (FOR DWA-1220C)

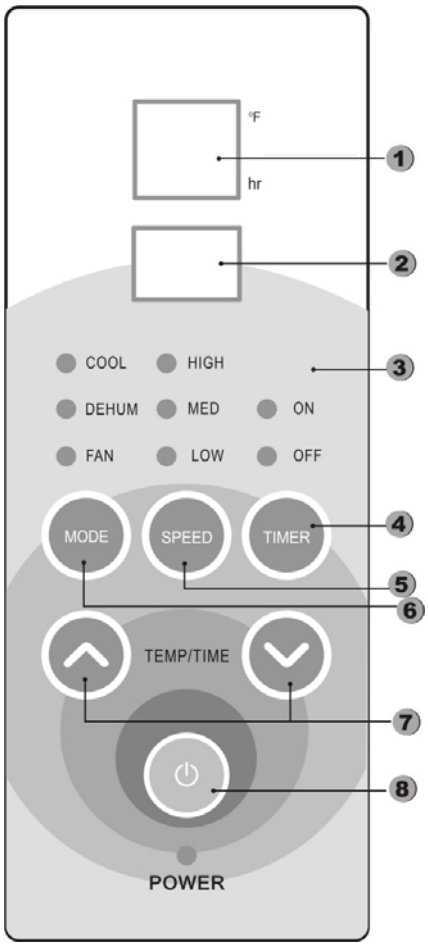
The temperature can be set within a range of 18℃ (64^{0}F) to 32℃ (90^{0}F). The temperature is to be reduced from 1 to 10. Turn the knob to adjust the needed temperature.

Turn clockwise for a cooler room temperature.

Turn counter-clockwise for a warmer room temperature.

The thermostat automatically starts and stops operation in order to keep the room temperature at a proper level, and this results in efficient use of power and economical coolin .

3.OPERATION PANEL (FOR DWC-0520RLE DWC-1220R DWA-1220R)



1 DIGITAL DISPLAY

In usual operation,In FAN mode,It indicates room temperature;In COOL or DEHUM(DEHUMIDIFICATION)mode,It indicates setting temperature;In timer operation,when pressing the timer button ,it indicates timer time,if the time has not been be adjusted after 5 seconds,it indicates temprature again;If ROOM TEMP SENSOR failure,It indicates temperature at 25℃(77°F).

2 REMOTE CONTROLLER SIGNAL RECEIVER

3 UNIT INDICATION SECTION

When selected the corresponding operation mode or fan speed,the light will be on.

4 TIMER button

If unit is running,Press this button will enter Switch-OFF mode;If unit is off(in standby mode),Press this button will enter Switch-ON mode.Press this button again will cancel the timer operation.Used together with▲or ▼button to set the timer time.

5 SPEED button

Press this button to set air rate you want:HIGH,MED,LOW.

6 MODE button

Press this button,it advances the operation mode as follows:COOL-DEHUM(DEHUMIDIFICATION)-FAN.

7 TEMP/TIME button

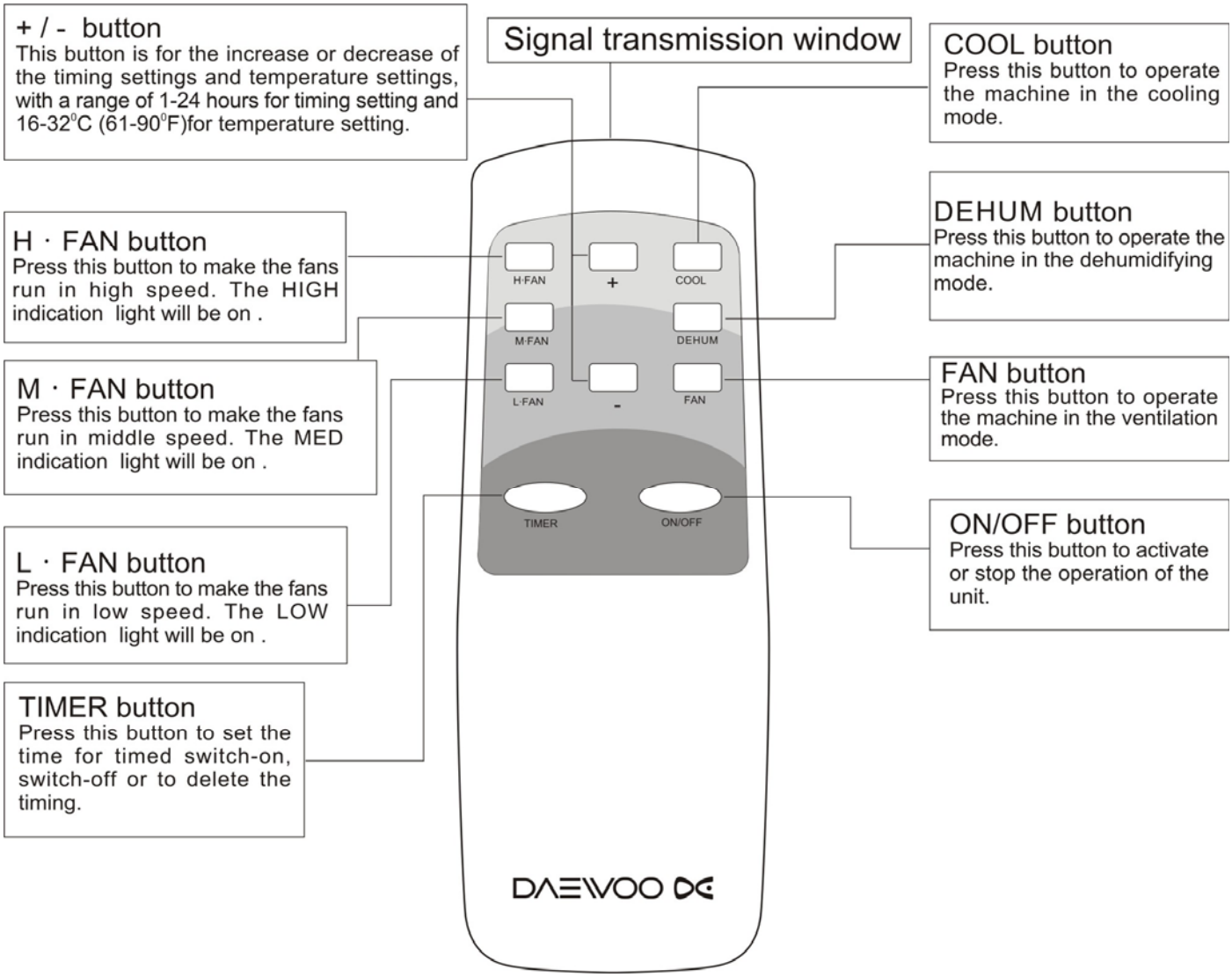
In usual, press this button to adjust setting temperature within a range of 16℃(61°F) to 32℃(90°F).In timer time setting state(press timer button to enter),press▲or▼button to set the timer time within 1-24 hours.

8 ON/OFF button

To turn the air conditioner ON,press the button and the power indicator will light.To turn the air conditioner OFF,press the button again.

4. FUNCTION OF MAIN COMPONENTS

4.REMOTE (FOR DWC-0520RLE DWC-1220R DWA-1220R)


+ / - button
This button is for the increase or decrease of the timing settings and temperature settings, with a range of 1-24 hours for timing setting and 16-32°C (61-90°F)for temperature setting.
Signal transmission window
COOL button
Press this button to operate the machine in the cooling mode.
H · FAN button
Press this button to make the fans run in high speed. The HIGH indication light will be on .
DEHUM button
Press this button to operate the machine in the dehumidifying mode.
M · FAN button
Press this button to make the fans run in middle speed. The MED indication light will be on .
FAN button
Press this button to operate the machine in the ventilation mode.
L · FAN button
Press this button to make the fans run in low speed. The LOW indication light will be on .
ON/OFF button
Press this button to activate or stop the operation of the unit.
TIMER button
Press this button to set the time for timed switch-on, switch-off or to delete the timing.
H·FAN
+
COOL
M·FAN
DEHUM
L·FAN
-
FAN
TIMER
ON/OFF
DAEWOO

3. MOTOR (FOR ALL MODLE)

The motor is used to rotate the indoor and outdoor fan so that the room air can be recirculated.

4. FAN (FOR ALL MODLE)

- BLOWER FAN: The Blower draws hot air from the room through the Evaporator and then discharges it back into the cool air. It circulates the room air.
- PROPELLER FAN: The propeller draws outdoor air through louvering and cools Condenser, and then blows the hot air out.

5. CAPACITOR (FOR ALL MODLE

The Capacitor enlarges the difference of phase between main coil and sub coil so that the Compressor and Fan Motor starts well.

6. ACCUMULATOR (FOR ALL MODLE)

The Accumulator blocks the unflow of liquid refrigerant and impurities into the Compressor.

5.GENERAL INFORMATIONS

1、CHANGING FLOW DIRECTION

Air flow deflectors divert air from center flow to left or right.

Adjust deflectors divert for desired dir flow pattern

2、AIR FLOW AROUND UNIT

Check indoor grill and outdoor louvers for air flow obstructions . Do not block air flow to and from unit . The outdoor coil should be checked and periodically cleaned for debris that may collect and block unit air flow .If air flow is obstructed or deflected back into unit ,the compressor may cycle on and off rapidly ,causing early.

3、Electrical Grounding Instructions.

This appliance is equipped with a three-prong plug for protection against possible shock hazards .If a tow-prong wall receptacle is encountered ,the customer is required to contact a qualified electrician and have the two-plug wall receptacle replaced with a properly grounded three –plug wall receptacle with the National Electrical Code.

4、USE OF EXTENSION CORDS

Because of potential safety hazards under conditions we strongly recommend against the use of an extension cord .However ,if you still elect to use an extension cord ,it is absolutely necessary that it is earthed and the marked rating of the extension cord should be 250V 10A or more for DWA-1220R DWA-1220C,Also ,it is absolutely necessary that it be a UL listed 3-wire grounding type appliance extension cord rated has a 3-blade grounding and 3-slot receptacle that will plug into appliance. The marked rating of the extension cord should be 125V 13A or more ,for Model DWC-0520RLE DWC-1220R.

5、 USAGE OF POWER CORD(AFCI OR LCDI)

Testing:

CASE 1 : Lamp exists

1. Plug into power receptacle.
2. If light is not on, press “RESET” button, light should turn on
3. Press “TEST” button, light must turn off.
4. Press “RESET” button again for use. Light should turn on.Do not use of above test fails.

CASE 2 : Lamp not exist

1. Plug into power receptacle. Turn on Unit.
2. 2a. If unit operates normally, press “TEST” button. Unit should trip. Press “RESET” button again for use
3. .2b. If unit not operate, press “RESET” button for use. Unit should operate. Do not use if above test fails.

WARNING :

Do not remove, modify or immerse this plug. If this device trips, the cause is to be corrected before further use, see owners manual.

This device must only be plugged on appropriate wall outlet.

Do not use on extension cords.

6. CARE AND MAINTENANCE

1. AIR FILTER

Clean the air filter, which removes dust inside the room.

It should be washed at least once every week during operation.

1. Remove the Air Filter from the front grill by pulling up.
2. Clean Air Filter with a vacuum cleaner or lukewarm, soapy water.
3. Shake it when clean to remove moisture completely. Replace it.

2. CLEANING THE AIR CONDITIONER

1. At least once a year, remove cabinet and thoroughly clean air conditioner. Have the unit inspected by an authorized servicer to ensure unit is functioning properly.
2. Wash air conditioner with lukewarm, soapy water as needed. Rinse and dry thoroughly.
3. If using concentrated liquid detergent, dilute in warm water first.
4. Front grill may be wiped off with a cloth dampened in a mild detergent solution.
5. Cabinet may be washed with mild soap or detergent and lukewarm water, then polished with liquid wax for appliances.
6. Condenser and Evaporator coils should be cleaned at the beginning of each cooling season. Use a soft brush or vacuum cleaner to clean them, making sure that the Condenser and Evaporator coils are not damaged.
7. Do not use abrasive cleaners. These items scratch, crack and discolor surfaces.

7. TROUBLE SHOOTING GUIDE

TROUBLE	SITUATION	ANALYSIS	CAUSE	REMEDY
Fan motor and compressor do not run	1. Power failure	1) Power plug	1) Power failure	• Consult your electric company
		2) Circuit breaker	2) Circuit breaker is tripped	• In case of a breaker, turn it on and off a few times
			3) Power plug is not contacting	• Replace the power plug
	2. Power is supplied, but the equipment does not run	1) receptacle	• Disconnection	• Repair or replace the receptacle
		2) Operation switch	• Mechanical failure of switch	• Replace the cord or lead wire
		3) Cord or lead wire to the switch	1) Disconnection	• Repair or replace the PCB board
		4) PCB board	2) Malfunction of contact	
			•PCB board failure	
Switch is in “cool” position or press "ON" of the remote but the compressor does not run	1. Not operating at all	1) Compressor	• Disconnection or burned-out	• Replace the compressor or connection wire
			1) Failure	
		2) Thermostat	2) Malfunction	• Replace
			3) Knob is not set to the proper setting	
		3) Selector switch		• Repair or replace
			• Failure of malfunction of proper setting	
		4) O.L.P	1) Disconnection	• Turn knob for cooler setting
			2) Malfunction of contact	
		5) Capacitor		• Repair or replace the swtting
			• Lack of capacity	
		6) PCB board		• Repair
			• Disconnection	
		7) sensor		• Repair or replace
			•PCB board failure	
				• Replace
			•sensor failure	
				• Repair
				• Repair or replace the PCB board
				• Replace

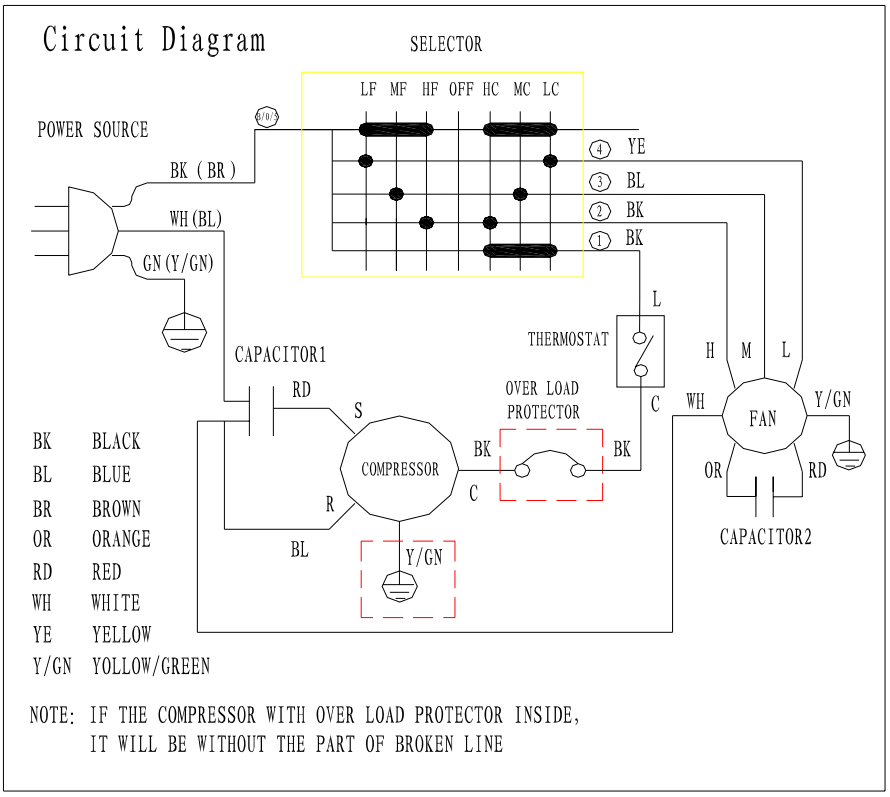
TROUBLE	SITUATION	ANALYSIS	CAUSE	REMEDY
	2. Compressor	1) Electricity	1) The voltage exceeded allowed range	• Consult your electric company
		2) Room temperature and outside temperature	2) Capacity of wire is not sufficient	• Check the capacity of wire
			• Extremely high	
		3) Compressor	• Burned-out	• Ventilate well and remove the heat source
			• Malfunction	
		4) O.L.P	• Lack of capacity	• Replace
		5) Capacitor		• Replace
				• Replace
	3. Frequent start and stop	1) Thermostat	• Malfunction	• Replace
		2) Capacitor	• Lack of capacity	• Replace
		3) O.L.P	• Malfunction	• Replace
		4) PCB board	• PCB board failure	• Repair or replace the PCB board
		5) sensor	• sensor failure	• Replace
The compressor runs but the motor doesn't run		1) Fan	• Blocked by others	• Repair
		2) Fan motor	• Disconnection or burned-out electric cord	• Replace the fan motor
		3) Capacitor	• Failure malfunction of contact	• Replace
		4) Fan motor circuit	• Disconnection of malfunction of contact	• Check the circuit
		5) PCB board	• PCB board failure	• Repair or replace the PCB board
Both fan motor and compressor are running but cooling is bad	Not cooling at all	1)Refrigerant system	1) Refrigerant system is choked	• Repair
		2) PCB board	2) Compressor failure	• Repair
		3) sensor	3) Leakage of refrigerant gas	• Recharge refrigerant gas
			4)PCB board failure	• Repair or replace the PCB board
			5)sensor failure	• Replace

TROUBLE	SITUATION	ANALYSIS	CAUSE	REMEDY
	Insufficient cooling	1) Refrigerant system	1) Refrigerant system is choked	• Check and repair refrigerant system
		2) Filter	2) Compressor failure	• Replace
		3) Heat exchanger of condenser	3) Leakage of refrigerant gas	• Check a part of Leakage and repair
			4) Refrigerant charge is too high	• Repair and recharge
		4) PCB board	• Clogged up with dust	• Clean the air fitter
		5) sensor	1) Fin is cogged up with dust	
			2) The ventilation is not good	• Clean the unit
			3) The unit is exposed to the sunlight	
			4) Other heat source is added int he room	• Shade the unit from the sunlight
			5)PCB board failure	• Remove the added heat source
			6)sensor failure	• Repair or replace the PCB board
				• Replace
Vibration & Noise		1) Installation place	• Installation of the unit is imperfectly done	• Install the unit perfectly
		2) Fan	1) Fan is contacted with obstacles	• Remove obstacles
		3) Fixing screws	2) Fixing bolt • Have a screw loose	• Tighten the bolt
		4) Electric components		• Tighten the screw
			• Electrical noise	• Exchange the components
Water leakage into room		• Installation condition	• The front is lower than rear side	• Make rear side of the unit lower than the front
Electric shock(Leakage of current)		• Insulation of components	1)Insulation defect of wiring and lead wire	• Check the unit's Leakage of current.
			2) Leak of current due to the dew or rust	• Replace the defective parts or components

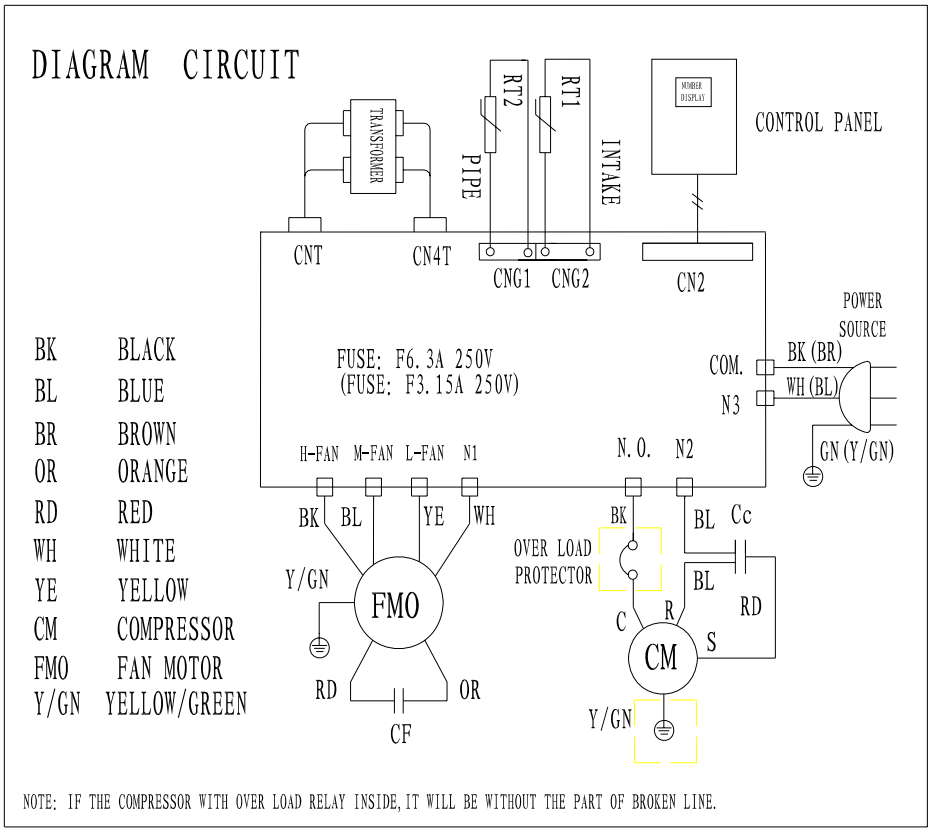
Please refer to the chapter 11 (Exploded diagram and parts list)

Before service of any part.	1. Stop the unit, remove the power cord from the receptacles. 2. Move the unit to the safe location for the suitable work.
Ass'y Fan Motor - Fan Motor - Propeller Fan - Blower Fan	1. Remove Front Grill - Remove Filter Pre. - Remove screw in Front Grill. 2. Remove Cabinet from the unit. - Remove screws from the unit's sides. 3. Remove Screw from Panel Housing's Side and Remove Holder EVA. 4. Remove Ass'y Control Box - Remove screws . - Remove wires in the each components. 5. Remove Plate Scroll 6. Remove wires in the Panel Housing. 7. Remove screws from Ass'y Fan Motor's sides. - Ass'y Fan Motor is assembly of Fan Motor, Propeller and Blower Fan, Orifice and Panel Housing. 8. Lift the Ass'y Fan Motor from the unit. 9. Remove Clip Fan from the shaft of Fan Motor. 10. Remove Propeller Fan from the shaft of Fan Motor. 11. Remove Blower Fan from the shaft of Fan Motor. 12. Remove Scroll 13. Remove Fan Motor from Panel Housing. - Remove screws .
Ass'y Control Box (FOR DWA-1220C) - Rotary Switch (selector) - Thermostat - Capacitor - Power Cord	1. Same as the procedure 1 to 4 in the Item 2.
Ass'y Control Box (FOR DWC-0520RLE、DWC-1220R、DWA-1220R) - Operation panel - transformer - PCB board - Capacitor - Power Cord	1. Same as the procedure 1 to 4 in the Item 2.
O.L.P	1. Same as the procedure 1 to 2 in the Item 2. 2. Remove Terminal Cover from Compressor. - Remove hex-nut .

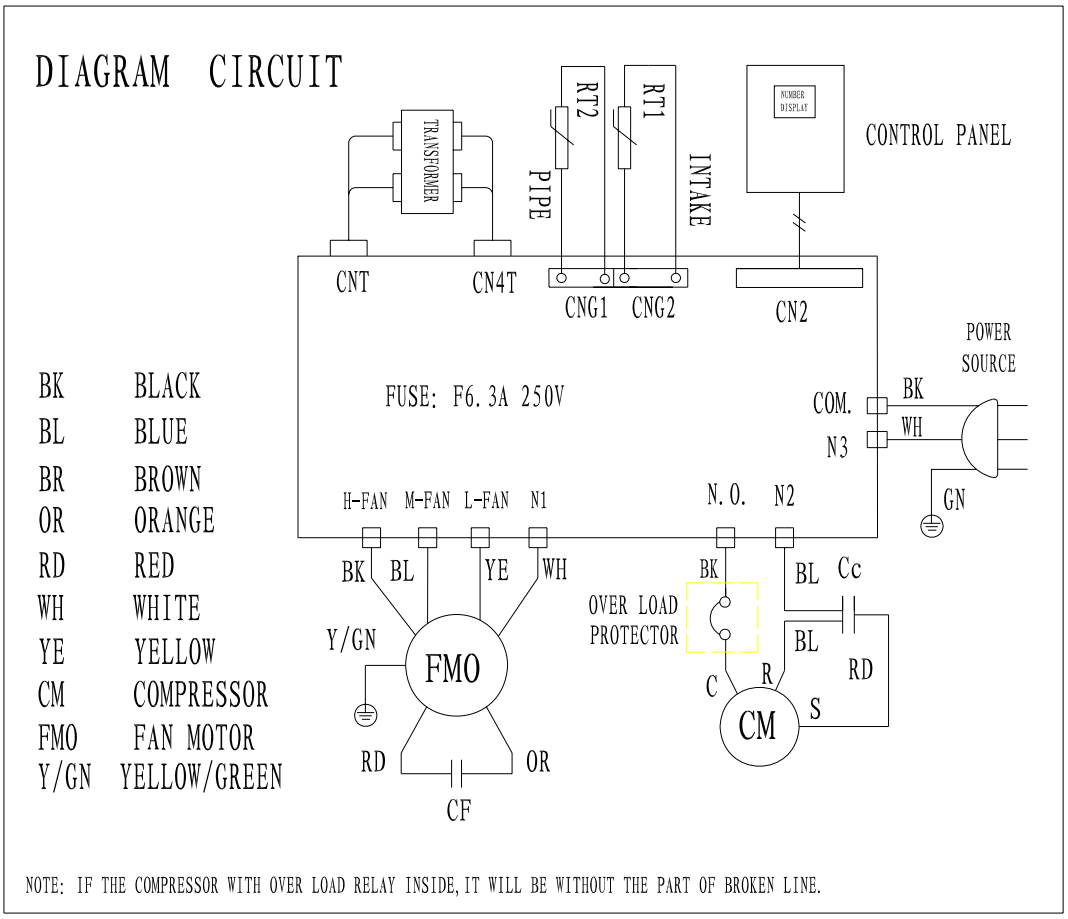
DWA-1220C



DWC-1220R、DWA-1220R

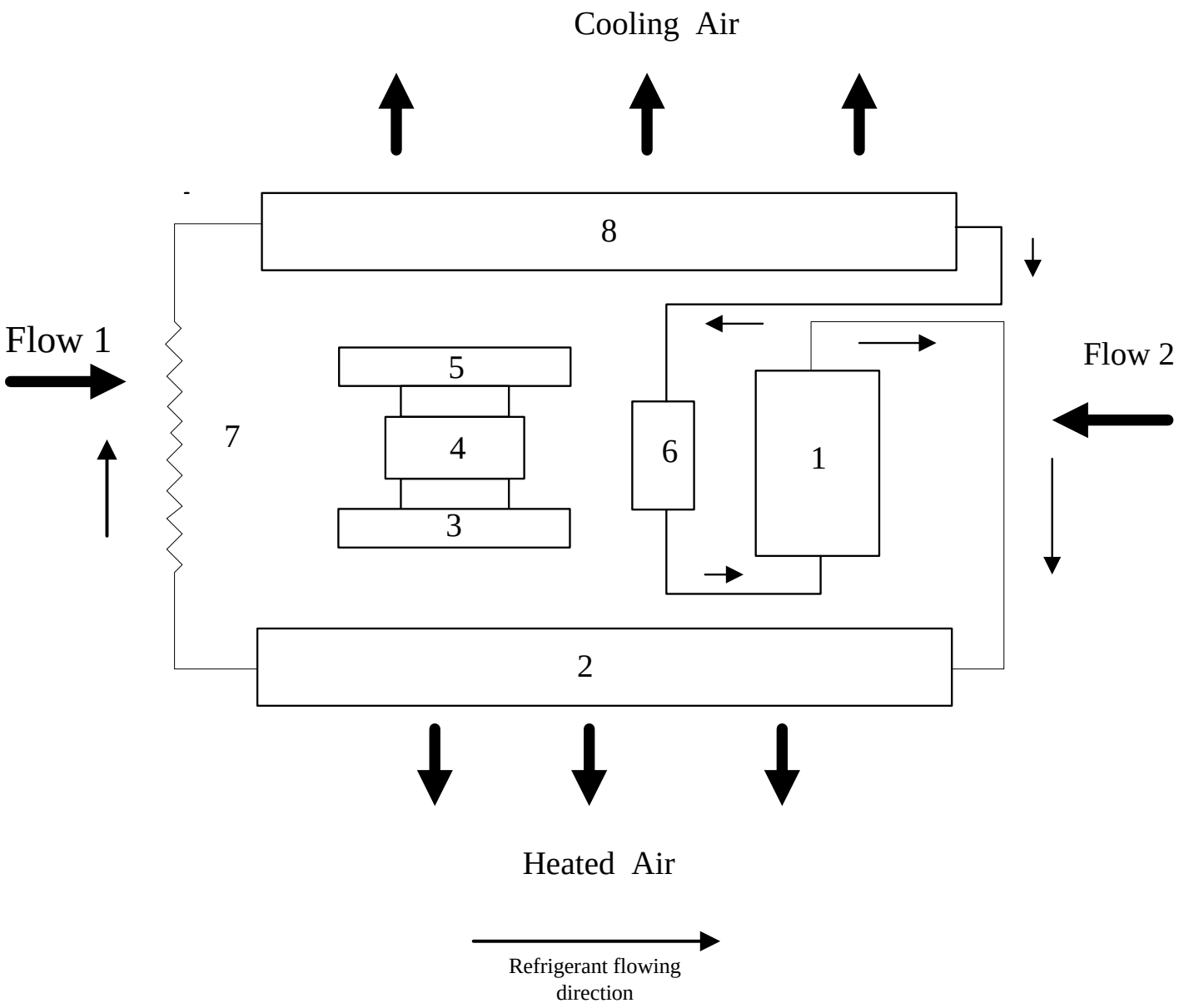


DWC-0520RLE



NOTE: IF THE COMPRESSOR WITH OVER LOAD RELAY INSIDE, IT WILL BE WITHOUT THE PART OF BROKEN LINE.

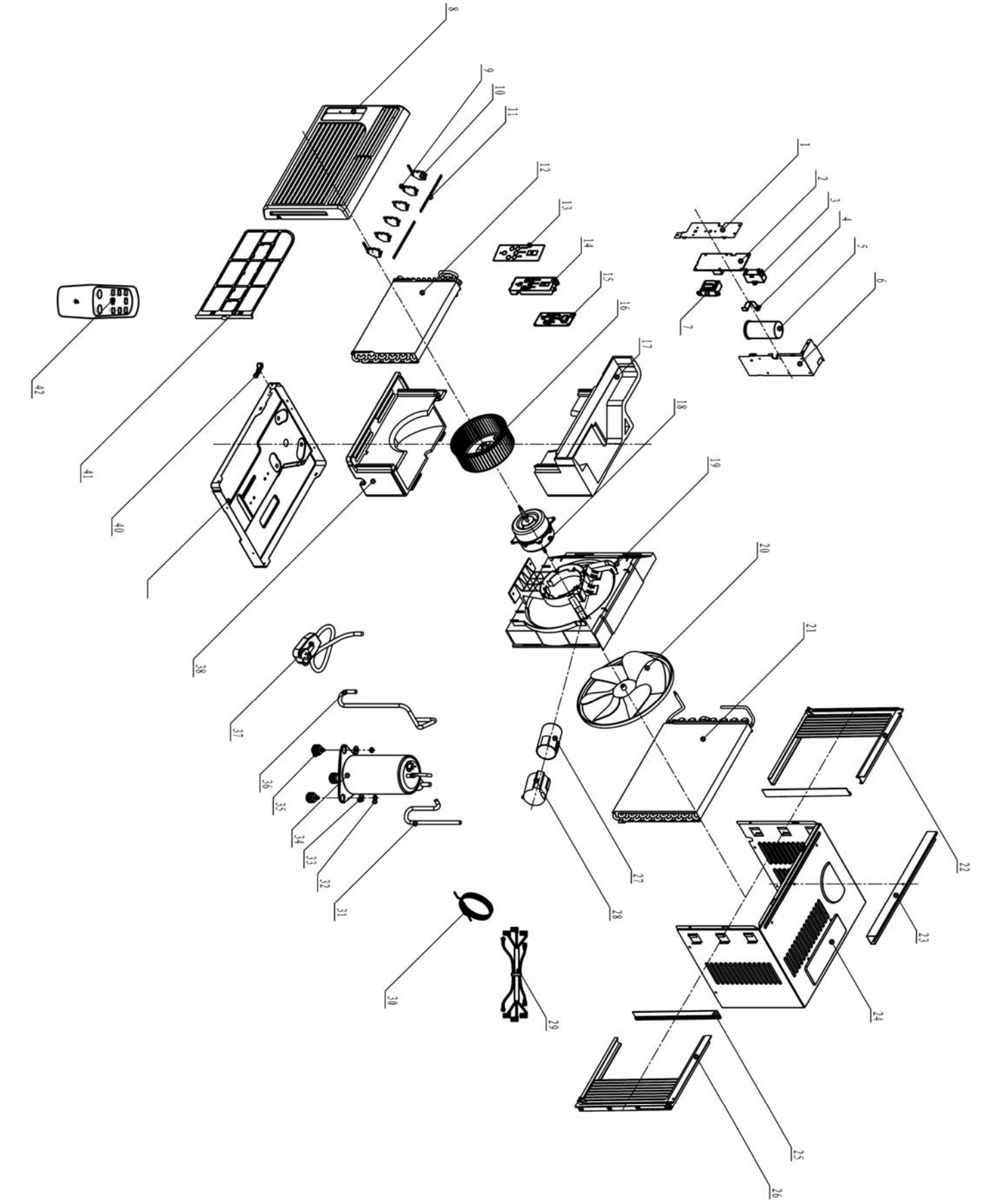
10. REFRIGERANT CYCLE



1 : Compressor 2 : Condenser 3 : Axial flow fan 4 : Motor 5 : Centrifugal fan 6 : Vapor liquid separator 7 : Capillary 8 : Evaporator

12 . EXPLODED DIAGRAM AND PARTS LIST

DWC-0520RLE

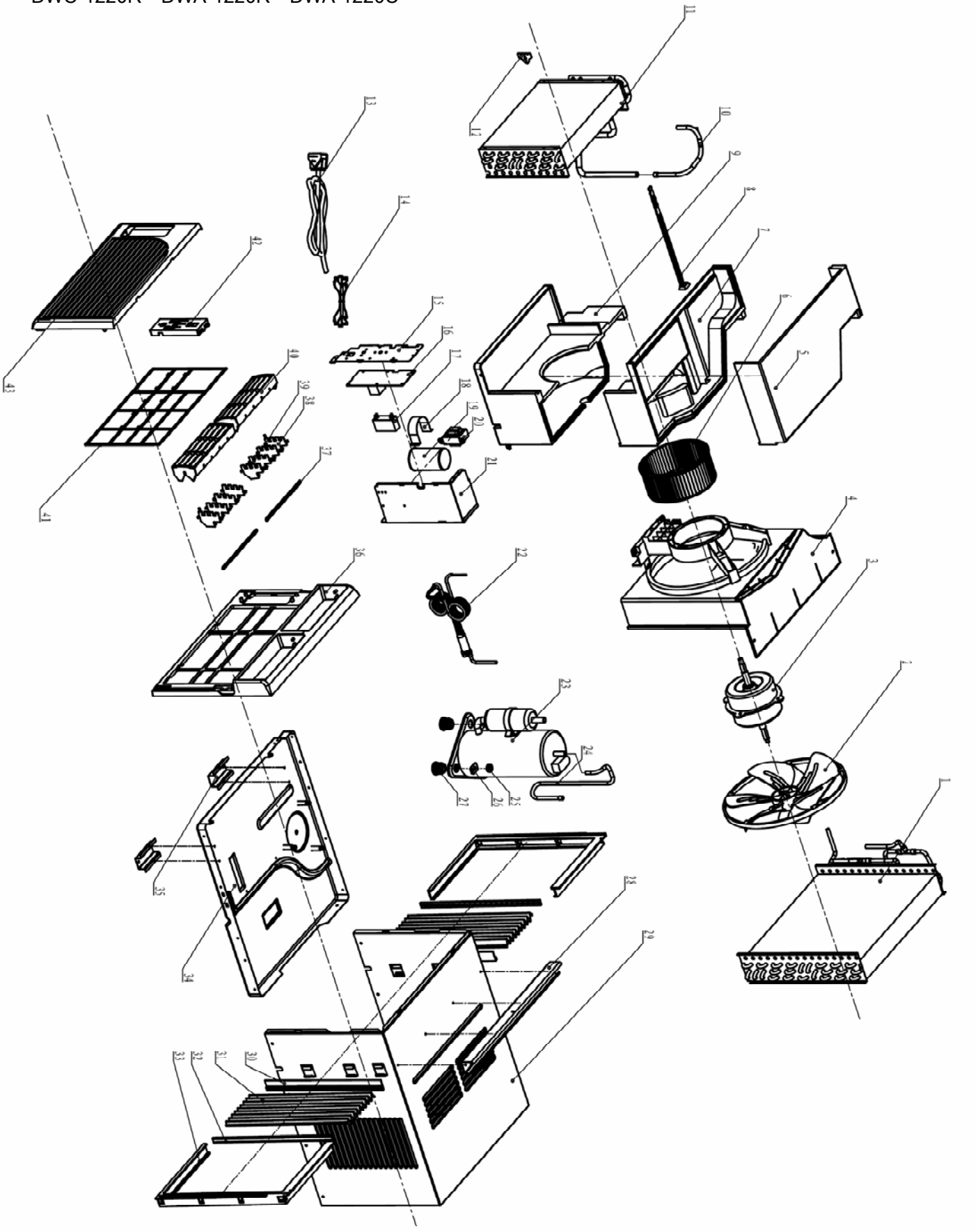


12.EXPLODED DIAGRAM AND PARTS LIST

Serial Number	Part Name	DWC-0520RLE
1	Electric box cover	314050004
2	PCB assembly	334100044R
3	Fan capacitor	030010034
4	Capacitor clamp	020140005
5	Compressor capacitor	320120067
6	Electric box	314040009
7	Transformer	321690020
8	Front panel	394990093
9	BSwing louver B	394990097
10	ASwing louver A	394990096
11	Rod of Swing louver	394990098
12	Evaporator assembly	972901561
13	Control film	411710051R
14	Control panel	394990099
15	Operation plate	337000275
16	Centrifugal fan	394010002
17	Upper propeller housing Of duct	437100005
18	Motor	320254038
19	Fan frame	394990092
20	Axial flow fan	394020005
21	Condenser assembly	972201069
22	Frame assembly left	394990090
23	Upper guide	314990078
24	Enclosure	314990079
25	Clip	394990088(89)
26	Frame assembly right	394990091
27	Capacitor box	——
28	Capacitor box cover	——
29	Connecting wire	348600026
30	Capillary assembly	361800004R
31	Suction pipe of compressor	360120199
32	Nut	150020003R
33	Gasket	314990067
34	Compressor	960101008
35	Anti-vibration pad for the compressor	401000086
36	Discharge pipe of compressor	360210067
37	Power cord	341124029
38	Lower propeller housing Of duct	437100004
39	Base assembly	314010047
40	Wire Clip	321100009R
41	Air filter	394050006
42	Remote controller	336814044

12.EXPLODED DIAGRAM AND PARTS LIST

DWC-1220R DWA-1220R DWA-1220C



12.EXPLODED DIAGRAM AND PARTS LIST

Serial Number	Part Name	DWC-1220R	DWA-1220R	DWA-1220C
1	Condenser assembly	372200113	372200113	372200113
2	Axial flow fan	394020007	394020007	394020007
3	Motor	320264016R	320263028R	320263028R
4	Fan frame	394990119	394990119	394990119
5	Upper part of propeller housing of duct	437100007	437100007	437100007
6	Centrifugal fan	394010004	394010004	394010004
7	Middle part of Propeller housing of duct	437100009	437100009	437100009
8	Door of fresh air	394990120	394990120	394990120
9	Nether part of Propeller housing of duct	437100008	437100008	437100008
10	Suction pipe of compressor	360130303	360130303	360130303
11	Evaporator assembly	371300021	371300021	371300021
12	Room temp. Sensor Holder	100280302R	100280302R	100280302R
13	Wire of electrical source	341121087R	341124025	341124025
14	Connecting wire	348300013 348600026	348300013 348600026	348300013 348400024
15	Electric box cover	314050006	314050006	314050006
16	Board of electrical source	334100041R	334100040R	——
17	CBB65 Compressor capacitor CBB65	030010052	030010017	030010017
18	C02 Capacitor clamp C02	313130012	313130012	313130012
19	CBB61 Fan capacitor CBB61	320110016R	030010010	030010010
20	transformer	321620014	321620025	——
21	Electric box	314040018	314040018	314040018
22	Capillary assembly	971900582	971900582	971900582
23	compressor	960114038	960114121	960114121
24	Discharge pipe of compressor	360220202	360220202	360220202
25	Nut	150020003R	150020003R	150020003R
26	Gasket	314990067	314990067	314990067
27	Anti-vibration pad for the compressor	305146005	305146005	305146005
28	Peak plate	314240003	314240003	314240003
29	Enclosure	314020022	314020022	314020022
30	Curtain bar B	394990118	394990118	394990118
31	window curtain	394990116	394990116	394990116
32	Curtain bar A	394990117	394990117	394990117
33	The frame of window curtain	394990128 394990129	394990128 394990129	394990128 394990129
34	Base	314010050	314010050	314010050
35	Underprop of the Base	314280025	314280025	314280025
36	Front panel	394132026	394132026	394132026
37	Swing louver Connecting rod	394990127	394990127	394990127
38	Swing louver A	394990125	394990125	394990125
39	Swing louver B	394990126	394990126	394990126
40	Air outlet	394990124	394990124	394990124
41	Air filter	394050008	394050008	394050008
42	Control panel	394990099	394990099	394990142
43	Air intake grill	394990123	394990123	394990123
——	Remote controller	336870146	336870146	——

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